



10/779,523

Patent changes indicated by adding -underlined and bold
Removing indicated by brackets.

Mathematical problem solving game

Abstract of the disclosure

In accordance with the present invention, a mathematical problem solving game, has a specialized (deck of cards, each card having an upper face providing a display of mathematical questions, positioned one above the other and coded to indicate their required skill level, each) game control box that when shaken will randomly display one solution number and four calculation numbers that must be used to form two questions having answers that can form a third question with a final answer equal to the (underlined) displayed solution number. (of the displayed question). A simple example: calculation numbers 2, 4, 1, 3 Solution number =2. to create a correct answer- form two questions 2-1=1 4-3=1 use the two answers to form one question 1+1 equal to the displayed solution number =2. to initiate the game the game control box is shook by the dealer and (a card) openly displayed for players to review the four calculation and one one solution number, players earn points by being the first to declare a (required) correct answer or the first to correctly declare No Solution Possible. and lose points by calling an incorrect answer or incorrectly calling "No solution".

FIELD OF THE INVENTION

The present invention relates to a dual (multi) skill level mathematical problem solving game and more particularly to a game that has unlimited players competing to be the first to solve a fixed format mathematical question, rules of the game provide means of scoring points and strategies for maximizing the points earned. A specialized (deck of cards has questions displayed on each specialized playing card face, each of the said questions being identified to) game box indicates (the) dual skill levels (required to) that can be used to formulate the correct answer. This dual skill level feature creates a capability for players of a variety of skill levels to (compete.) play the game. (While the present

10/779523

H. LAYNO
ART UNIT 3711

invention relates to a deck of cards, it also envisages such a game that is adaptable to game boards.
random number selection devices and computers.)

BACKGROUND OF THE INVENTION

We are repeatedly reminded of how computers are detracting from the mathematical skill levels of society as a whole and children in particular, thus there is a need for an amusing and competitive card game (which) that also enhances mathematical skills.

With respect to educational (card) games, up to the present time, players have been limited to games that have not been structured to increase mathematical skills (a specialized card deck.) In general, educational (card) games are limited to following types:

1. Memory retention games. These are limited to developing the memory
2. Games that reward for identifying word meanings. This is excellent for language enhancement but fails to enhance mathematical skills.
3. Games that involve the use of numbers on the cards to make a decision related to the optimum card to play. These are excellent for addition or subtraction but are limited in true mathematical skill development.
4. Games that require mathematical calculations with the use of standard playing cards, however they lack the structure and competitiveness of using the specialized equipment (playing cards) and the rules of the present invention.

Educational card games are well known in the prior art, of particular reference to the present invention are as follows: U.S. Pat. 20030234493 of Friemano Shlomo Ruvane issued Dec 2501 2003. Specifically designed to teach young children an alphabet or other basic skills.

10/779,523³

H. LAYNO
ART UNIT 3711

U.S. Pat. 20030168809 Richardson Jeff September 11 2003 provides a game that uses pieces similar to the well known domino game for a requirement to add and subtract numbers while not fully challenging mathematical skills.

SUMMARY OF THE INVENTION

It is the object of the present invention to provide a mathematical problem solving game that is fun to play. It is a further the object of the present invention to provide such a game, providing a plurality of skill levels wherein means for competing with the (mixed) skill levels of children and adults exist.

In accordance with the present invention a mathematical problem solving game is provided of the type comprising of a specialized Game Control box that has the function of establishing and displaying four random calculation numbers from a selection of numbered discs stored in the control box, is achieved by shaking an enclosed game control box containing a plurality of numbered discs . The shaking of the game control box releases and displays four random calculation numbers. The fuction of displaying a single random solution number is achieved by the control box having a surface with a dial pointer that is physically spun by a player and comes to rest at at a sectioned position on a dial face. The inner numbers of the sections are selected as the low skill level solution numbers, the outer numbers for higher skill levels (deck of cards, each card face displaying dual skill level of unique mathematical questions, each of the said questions are coded to denote the specific skill level (required to solve the mathematical question, Thus the ability for players to select questions within their skill limits has been provided. the said questions are coded to denote the specific skill level (required to solve the mathematical question),

It is a further accordance of the present invention to provide an enjoyable and competitive mathematical game,

10/879,523

H. LAYNO
ART UNIT 3711

The said mathematical game is started by a player shaking the game control box to cause the display of four calculation numbers and spinning a dial to display a single solution number (a single card being placed face up), and then placing the said game control box face up in a location that simultaneously displays the aforementioned mathematical questions to all game players, (an unlimited number of) each of whom can earn points by being the first player to solve the question (identified by a pre-determined skill level code.) using a pre-established fixed format.

(Players may sit on both sides of the dealer to obtain optimum orientation related to the displayed)

Each mathematical question is in a fixed format of four calculation numbers on discs and one (underlined) solution number displayed by a pointer, whereby the four calculation numbers must be divided into two (sums) questions incorporating each of the four calculated numbers just once, having answers, that can be combined to form a third (sum) question comprising an answer that equals the solution number of the displayed mathematical question.

Addition, subtraction, division and multiplication may be required to generate said correct solution.

(To increase fun) Enjoyment and competition is increased by a percentage of questions not having a possible solution a (valid) declaration of "No solution possible" can be made by a player with the result that remaining players will be time limited to find a correct solution.

Players will be awarded points for the following:

1. The first player to declare "Solved it." and provide a correct solution
 2. For correctly declaring "No solution possible"
 3. For correctly calling "Solved It" after a "No solution possible" has been declared. (Should a player declare "Solved it." then fail to provide a correct answer, remaining players will be awarded a point.)
- A timing device (may be) is used to limit the time available to provide a solution.(find an answer.) Thus the requirement for a competitive and fun game has been met.

10/779,523⁵

H. LAYNO
ART UNIT 3711

BRIEF DESCRIPTION OF THE DRAWINGS (Obsolete)

(Figure 1 Depicts the upper face of a specialized playing card within the scope of the present invention whereby a (variety of) unique mathematical questions are displayed (together with: a code that denotes the skill level reqttired) to form a correct answer for each unique mathematical Question.

(Figure 2 Depicts the upper face of a specialized playing card within the scope of the present invention whereby a variety of tmique mathematical questions are displayed together 57:1t11 a code that denotes the skill level required to formulate a correct answer for each unique mathematical question.)

Fig. 2 Illustrates a face view of the selected playing card indicating a solution number 26 that results in no solution possible.

A sample solution has been temporarily added in italics below each displayed mathematical question to enhance this patents clarity of explanation of the required fixed mathematical question-solving format.)

DRAWINGS AND DETAILED DESCRIPTION TOTALLY AMENDED TO ELIMINATE REJECTED USE OF PLAYING CARDS

Fig. 1 Is a front perspective view of an enclosed game control box structure with timer shown stored, dial face and stored discs not shown for clarity.

Fig. 1a Is an end view illustrating the control box window display compartment and a flange that controls the entry of numbered discs into the game control box window display compatment

Fig 1b Isolates a single control box numbered disc

Fig.2 depicts a control box face displaying a mathematical problem that has no solution.

Fig 3 Illustrates the Timer raised ready to be inverted.

Fig 3a illustrates the timer in a storage position.

10/779,523⁶

ALAYNO
ART UNIT 3711

Amended DETAILED DESCRIPTION OF THE INVENTION

A mathematical problem solving game requiring players to solve a unique mathematical problem using a fixed format that requires calculations to form two questions whereby the answers to the aforementioned two questions are amalgamated into a third question having an answer equaling the correct solution as displayed.

With respect to Fig. 1 An enclosed game control box (1) stores a plurality of numbered discs (2) to initiate each mathematical problem solving game, a player shakes the game control box (1) to cause four numbered discs (2) to enter the game control box (1) display window (3) by passing by an access flange (4) located at the base of a numbered disc (2) storage compartment (5) thus four numbered discs (2) are randomly selected and displayed in the game control box (1) window display compartment (3)

With respect to Fig. 2 For the function of selecting a solution number (6) located on the face of the game control box (2) is a dial face (7) players are required to spin the dial face (7) pointer (8) to select a solution number (9) for lower skill levels the inner dial face (7) number (9) will be selected as the solution number (6) for higher skill levels the outer dial face number (10) selected.

Illustrated are a selection of four calculation numbers 7,3,5,9 and a solution number 26. A correct answer to this problem is "salution is not possible"

Fig. 2a Illustrates the solving of the unique mathematical problem in the mandatory format required by mathematical problem solving game rules of using each of the four calculation number just once, to create two questions, that have answers that are then formed into a third question having a correct answer that equals the solution number 20.

Fig. 3 Illustrates a sand timer (11) used by the act of inverting the sand timer (11) in order to measure the conclusion of a fixed time period. The sand timer (11) is shown ready for use, a spring (12) is

7/779,523

H LAYNO
ART UNIT 3711

compressed during gamecontrol box storage and expands to cause the timer (10) to protrude for easy access when a scoring slide (13) is moved from above the sand timer. (10)

ORIGINAL TEXT PRIOR TO AMMENDMENT

(With respect to Figure 1. (Specialized playing cards each display within the scope of the present invention, unique mathematical questions consisting of four calculation numbers (2) and one underlined solution number (4) with skill levels required to solve the unique mathematical questions (2) complete solution (5)(6), being numerically identified as a skill level (7)(8)(9)(10)).

With respect to Figure 1.

With respect to Fig. 2 The function of selecting a solution number Players are required to solve the unique mathematical questions, (2) by creating two sums (5) each of the two sums (5) to consist of two numbers in a manner that utilizes each of the four calculation numbers (3) a single time, with the object that the resulting answers to the two sums (5) can be formed into a third two number sum, (6) whereby the answer to the third two number sum (6) equals the underlined solution number (4).

5/8

The level of skill required to solve the unique mathematical question increase when progressively as the skill level numbers increase. Skill level 1 (7) unique mathematical questions (2) are of a high simple nature.)

Per example illustrated, both the solution number and the calculation numbers are randomly chosen when by the dealer shaking the (1) game control box Fig.2 (skill level 1), Calculation numbers (2) 6,5,12,3, solution number 10 displayed, for correct answer formulation, two sums are created from the calculation numbers $6-5=1$ $12-3=9$ having answers that form a question $1+9=10$ having an answer equal to the solution number 10. Had the random calculation numbers remained the same and the

~~10/779,523~~⁸

H. LAYNO
ART UNIT 3711

calculation number changed to 6 the fixed format question would be $6, 5, 12, 3 = 6$ and the fixed format solution $6 \times 5 = 30$ $12 \times 3 = 36$ $36 - 30 = 6$

(($(3 + 1 = 4)$ (5)) the two) answers to the two questions (sums) (5) are then used to create a third question (sum) $9 + 1 = 10$ initiate the game. tical question (2) answer being $4 + 2 = 6$ (5) $3 + 1 = 4$ (5) $6 - 4 = 2$ (6)

Per example illustrated in skill level 2, (8) Calculation numbers (3) 6, 3, 8, 4 Solution number (4) = 6 - The complete unique mathematical question (2) answer being $6/3 = 2$ (5) $8 - 4 = 4$ (5) $2 + 4 = 6$ (6)

Per example illustrated in skill level 3 (9) Calculation numbers (3) 3, 4, 7, 2. Solution number (4) # the complete unique mathematical question (2) answer being $3 \times 2 = 6$ (5) $7 - 4 = 3$ (5) $6 + 3 = 9$ (6)

Skill level 4 (10) Calculation numbers (3) 1, 3, 6, 14, 2 Solution number (4) 2.4 The complete mathematical question (2) answer being $13 + 14 = 27$ (5) $6/2 = 3$ (5) $27 - 3 = 24$ (6)

A player, upon solving the unique mathematical question (2) will first declare "solved it" then declare the unique mathematical question (2) complete solution (5)(6) In the event of a plurality of correct answers being possible, all correct answers will be acceptable.

The embodiments of the invention in which an exclusive property or privilege is claimed are a Mathematical Problem Solving Game with a fixed format problem solving solution, consisting using the calculation numbers displayed by the game wof forming 3 questions to produce a final answer equal to the solution number displayed three sums defined as follows:

1. A mathematical problem solving game, comprising a game control box displaying four numbered discs and a pointer to randomly select and display a solution number for the purpose of formulating a fixed format mathematical problem question involving the forming of three fixed format questions. 3.

of a solution with a fixed format solution involving three sums)

10/779523

9

H. LAYNO
ART UNIT 3711

2. A Mathematical Problem Solving Game of claim 1 wherein the awarding of a scoring point is subject to the following rules: a rule that permits players to pre-select the level of difficulty, as indicated by a

dial pointer (coding) located on the **game control box** (specialized card) of claim 1 .

a rule that multiplication, division, subtraction and addition may be required in the solving of the displayed (unique) mathematical question.

a rule that requires that (a single card from the deck of specialized cards of claim 1 be placed face up in view of an unlimited number of) **a player initiates the start of the mathematical problem solving**

game of claim 1 by shaking the game control box of claim 1 to randomly select 5 numbers consisting of 4 calculation numbers and 1 solution number displayed in a fixed format.

a rule that a fixed format of four calculation numbers be **each used once to form two dual number questions having answers than can be formed into one dual number question having an answer**

equal to the (and one) **solution number displayed.** (as a unique mathematical question on a

specialized card from the deck of specialized cards of claim 1 to create two stlms, each of the said two sums to consist of two numbers in a manner that utilizes each of the four calculation numbers a single time, with the object being that the resulting answers to the said two stlms being such that they can be formed into a third stlm to provide the correct solution to the unique mathematical question displayed, whereby the said third sum answer, equals the solution number provided in the associated unique mathematical question.)

(a rule that establishes that questions displayed on a specialized card from the specialized deck of cards of claim 1 , be of an identified variety of skill levels.)

10/779,520 3

H. LEYNO
ART UNIT 3711

a rule permitting a questions displayed on the game control box (specialized cards) of claim 1 to not have a solution, for purpose of establishing a first to declare "No possible solution"

a rule that appropriately rewards with points the first player to either, identify a solution, correctly identify "no possible solution" or identify a solution after "no solution has been declared".

(a rule that awards double points to a player that identifies a solution after a "no possible solution" has been declared by another competing player.)

(a rule that if a player fails to disclose a correct solution following a declaration of "solved it" remaining players are awarded points.)

a rule permitting a timing device to limit the time available to solve a unique mathematical question.